also found trypanosomes in about 30 per cent. of the wild game—namely, in the waterbuck, mpala, hartebeest, and warthog—but not in the elephant, rhinoceros, zebra, bushpig, or hunting dog; the trypanosomes found comprise three species—namely, *T. pecorum, T. vivax,* and *T. rhodesiense,* of which only the last-named is a human parasite.

The work of Kinghorn and Yorke thus confirms and greatly extends the previous results of Taute (*Zeitschrift für Hygiene,* lxix., 1911, p. 553), who, by laboratory-experiments carried on in the Tanganyika district, found that *T. gambiense* could be transmitted by *G. morsitans.* There can now be no longer any doubt that the infection of sleeping sickness can be conveyed by *G. morsitans* as well as by *G. palpalis,* which was thought formerly to be alone capable of transmitting the disease. Consequently the fact is established that sleeping sickness is not confined necessarily to regions coextensive with the distribution of *G. palpalis,* but can have a vastly wider range. From the administrative point of view this is a conclusion of the utmost importance, and, combined with the apparently widespread occurrence of the trypanosome as a harmless parasite of wild animals in nature, one which greatly complicates the problem of checking the spread of sleeping sickness.

NOTES.

THE list of honours on the occasion of the King's birthday, which was celebrated on June 14th, includes the name of only one fellow of the Royal Society, Lieut.-Col. D. Prain, director of the Royal Gardens, Kew, who has been knighted. Among others upon whom a like honour has been conferred are Mr. B. G. A. Moynihan, professor of clinical surgery at the University of Leeds; Mr. C. H. Read, president of the Society of Antiquaries; Mr. J. Bland Sutton, the distinguished surgeon; Dr. St. Clair Thomson, professor of laryngology and diseases of the throat at King's College Hospital. Another honoured member of the medical profession is Mr. R. J. Godlee, president of the Royal College of Surgeons, who has been created a baronet. The Companions of the Order of St. Michael and St. George (C.M.G.) include Dr. A. Balfour, director of the Government Research Laboratory, Gordon Memorial College, Khartoum; Mr. J. Currie, principal of the same college; and Mr. J. M. Macoun, assistant botanist and naturalist, Canadian Geological Survey. Dr. G. A. Grierson and Dr. M. A. Stein have been appointed Knight Commanders of the Order of the Indian Empire (K.C.I.E.), and among the new Companions of the same Order (C.I.E.) are Mr. B. Coventry, director of the Indian Agricultural Research Institute; Mr. A. Chatterton, superintendent of industrial education, Madras; and Dr. P. C. Ray, professor of chemistry, Presidency College, Calcutta. Mr. C. E. Fagan, assistant secretary of the British Museum, has been made a Companion of the Imperial Service Order (I.S.O.).

THE annual conversazione of the Institution of Electrical Engineers will be held at the Natural History Museum, South Kensington, on Thursday, June 27.

THE twenty-third annual conference of the Museums Association will be held in Dublin on July 8–12, under the presidency of Count G. N. Plunkett, director of the National Museum of Ireland. The honorary secretary of the association is Mr. E. E. Lowe, The Museum, Leicester.

WE regret to see the announcement of the death, at seventy-two years of age, of M. C. André, director of the Lyons Observatory and correspondant of the Institute of France; also of Prof. H. F. Weber, director of the Physical Electrotechnical Institute at Zurich, at sixty-nine years of age.

IN reply to a question asked in the House of Commons on Tuesday, June 18, Mr. Runciman said that the duties of the new horticultural branch of the Board of Agriculture and Fisheries will embrace all sections of the horticultural industry. The head of the branch will be Mr. A. G. L. Rogers, and he will have the assistance of an entomological expert, eight other expert outdoor officers with various technical qualifications, and an adequate clerical staff.

WE are informed that the Crocker Land expedition, which, as described in NATURE of April 25, p. 207, was to have gone northward this summer under the leadership of Mr. George Borup and Mr. D. B. MacMillan, has been postponed to the summer of 1913, on account of the lamentable death of Mr. Borup and the impracticability of finding a substitute for him in the short time remaining before the expedition was to start.

THE death is announced on June 13 of Dr. Shadworth H. Hodgson, at the age of seventy-nine years. Dr. Hodgson was distinguished as a metaphysician and philosopher, and was the author of the following works, among others:—"Time and Space: A Metaphysical Essay," issued in 1865; "The Theory of Practice," an ethical inquiry published in 1870; "The Philosophy of Reflection," in two volumes (1878); and "The Metaphysic of Experience," published in four volumes in 1898. He was the first president of the Aristotelian Society, and held the office for fourteen years. He was also an honorary LL.D. of Edinburgh, a corresponding member of the French Academy of Moral Sciences, and a fellow of the British Academy.

FULL particulars are now available of the annual meeting of the Société helvétique des Sciences naturelles, to be held at Altdorf on September 8–11, as already announced in NATURE. The meetings will be presided over by Dr. P. B. Huber, and the first general meeting will be held on September 9, when the president's address will be delivered and lectures given by Prof. Wiechert, of Göttingen, on atmospheric electricity, and by Prof. G. Bertrand, of Paris, on the chemical composition of living organisms. The second general meeting will be held on September 11, when Prof. Weiss, of Zurich, will lecture on atoms and molecules in the light of recent magnetic researches; Dr. P. Arbentz, of Zurich, on the structure of the Central Alps; and Dr. Paul Sarasin, of Bâle, on the Swiss National Park. Numerous excursions and social gatherings have been arranged, and there is every prospect of a successful meeting.

The Daily Chronicle of June 11 contains an account of the skeleton of a mammoth which has just been set up in the museum at Stuttgart, and is stated to be larger than any other known specimen. The skeleton was found at Steinheim, in Swabia, in the summer of 1910. The tusks are of no very great size, measuring 7½ feet; but the skeleton is remarkable for the great relative length of the legs, especially the front pair, as well as for the great width of the molars. We understand that this skeleton is about to be described as representing a distinct local race of the mammoth. Somewhat curiously, a second mammoth skeleton has recently been set up in the Völkerkunde Museum at Leipzig. This skeleton, which is nearly complete, has been described by Dr. J. Felix, in the *Veröffentlichungen der Städt. Mus. für Völkerkunde* for the present year. It was discovered in December, 1908, under a considerable thickness of sand and clay, near Borna, its presence being revealed by the tip of one of the magnificent tusks. The skeleton stands 3·20 metres in height.

THE summer has opened with very different weather from that which characterised the early part of the summer last year. During the first half of June the highest temperature at Greenwich was 71°, whilst last year there were in the corresponding period three days with the thermometer above 80°. There were fifty-six fewer hours of bright sunshine this year, whilst the principal difference has been in the rainfall. In the first fifteen days of the month the rainfall at Greenwich was 1·96 in., which is 0·02 in. more than the average for the whole month, whilst last year for the corresponding period the total rainfall was 0·04 in. At Kew the rainfall for the first half of June this year was 2·38 in., at Camden Square 2·46 in., and at Hampstead 2·61 in. The summary of the weather issued by the Meteorological Office for the first two weeks of June shows that the rainfall was largely in excess of the average over the entire kingdom, the greatest excess occurring in the English districts. In the midland counties the rainfall for the two weeks was 265 per cent. of the average, in the south-east of England 254 per cent., in the south-west of England 245 per cent., and in the north-west of England 244 per cent. of the average. The duration of bright sunshine for the two weeks was everywhere largely in defect of the average.

AN exhibition of non-ferrous metals, organised by Mr. F. W. Bridges, with the aid of an influential advisory council, presided over by Sir Gerard Muntz, was opened on Saturday, June 15, at the Agricultural Hall, Islington. This is the first exhibition devoted to non-ferrous metals which has yet been held, and the exhibits, although not very numerous, are of a striking and interesting kind, including a series of products which represent the most advanced achievements of metallurgy. Several exhibits are of considerable scientific interest. Thus the increasing demand for vanadium in the metallurgy both of steel and of other metals furnishes an example of the practical use to which metals are now put which, but a short time ago, were never seen outside the show-cases of chemical museums. Incidentally, the production of vanadium from its ores has also resulted in the production of uranium as a by-product, and the exhibit of the International Vanadium Company illustrates these products in a striking manner. Another fine exhibit is a very large slab of "star" antimony, upon which the dendritic crystals of that metal are exhibited in a very beautiful way, by Messrs. Cookson, of Newcastle. The same firm also shows crystals of antimony closely resembling those of bismuth, which can be obtained by pouring off the residual liquid when a slowly cooling ingot has formed a crust. The examples of antimony crystals obtained in this way which are shown at the exhibition are remarkably fine. More strictly utilitarian are the various exhibits of "ribbon metal" produced by allowing molten metal to run in a thin stream upon the surface of a rapidly revolving iron drum; some of the many uses of such material, such as the caulking of pipe joints and for the chemical reactions which occur in gold cyaniding, are illustrated.

THE tenth annual report of the director of the Bureau of Science at Manila, Dr. Paul C. Freer, for the year ending August 1, 1911, has been received. It is an excellent record of scientific work done in the Philippines, and covers so wide a field that it is impossible here to attempt an enumeration of the researches completed. One instance of the useful character of the work accomplished by the Bureau may be cited. In August, 1910, a plan was devised whereby a temporary anti-mosquito brigade was established to eradicate the brown mosquito, *Culex fatigans,* Wied, in Manila, and incidentally to lessen the day mosquito, *Stegomyia persistans,* Banks. The director reports that the brown mosquito has been practically exterminated, and it is now almost impossible to secure specimens of it for experimental purposes. Other examples, by which silk culture has been developed and improved, and the growing of tobacco has been made more satisfactory and more profitable, are dealt with fully in the report. Indeed, the Bureau of Science has in the ten years of its work so extended its activities that it is in close contact with the life and industries of the Philippines in every direction.

IN the many investigations that have been carried on with regard to the transmission of trypanosomes by tsetse-flies, the frequent presence, in the digestive tracts of flies caught wild in nature, of flagellate parasites known comprehensively as *Trypanosoma grayi* has been a standing puzzle. The name was given by Novy on the evidence of microscopical preparations sent to him from Uganda by Gray. Earlier investigators, including Koch, regarded these flagellates as stages of *T. gambiense,* the trypanosome of sleeping sickness. Minchin, who disproved this notion, regarded *T. grayi* as representing possibly the developmental stage of a bird-trypanosome in the tsetse. Kleine brought forward experimental evidence to show that it was the trypanosome of the crocodile. Most recently Roubaud has brought forward new observations in favour of the opinion, first expressed by Novy, that *T. grayi* is a parasite peculiar to the fly itself, without a vertebrate host of any kind, and refers it to his genus, Cystotrypanosoma. The whole question is discussed in the recently published bulletin, No. 37, of the Sleeping Sickness Bureau, where it is suggested that possibly two species of flagellates are in question, the one a parasite of the tsetse alone, the other the developmental stage of the crocodile-trypanosome.

WE have to acknowledge the receipt from the publisher—Hugh Rees, Ltd., Regent Street, S.W.—of a copy of a "Diary" for collectors of birds' eggs, which appears to be well suited to its purpose. Collectors are advised not to take more than a single egg from any one nest save in exceptional circumstances.

IN describing a new race of bighorn sheep from the Sierra Nevada, Mr. J. Grinnell (Univ. Cal. Zool. Pub., vol. x., No. 5) points out that the desert-haunting forms of these sheep have larger ears than those which dwell among more genial surroundings. As a similar feature occurs in other desert mammals, it may doubtless be regarded as an adaptive provision, thereby indicating a difference in the intensity of sound-transmission in the two environments.

To the third part of vol. xii. of the Proceedings and Transactions of the Nova Scotian Institute of Science, Mr. W. S. Brodie contributes an article on certain peculiar mounds which border the shores of Grand Lake, Cape Breton, and other lakes in the province. Attaining a maximum elevation of from 5 to 6 ft. above the level of the lake, these mounds have been regarded as the work of beavers, but the author gives reasons for considering them as glacial, and more or less nearly akin to "eskers."

IN the report on the progress of the U.S. National Museum for the year ending June 30, 1911, occasion is taken to give a *résumé* of its history, followed by an account of the completion and occupation of the new building, which took place on June 20 of the year under review, six years after the excavations for the foundations were commenced. The resources of the zoological department were heavily taxed during the year in coping with the great collections of mammal skeletons and skins obtained by the Roosevelt and other expeditions; no fewer than 3000 skulls were cleaned while more than 300 skins of the larger mammals were tanned. The collection of North American mammals made by Dr. C. H. Merriam, previous to his entering Government service, which contains many type specimens, was secured during the year.

THE present condition and future prospects of the great herds of wapiti which visit that portion of the valley of the Snake River in Wyoming known as Jackson Hole every winter, after passing the summer in or near the Yellowstone Park, are discussed by Mr. E. A. Preble in U.S. Dept. Agriculture Biological Survey Bulletin No. 40. The number in these herds is estimated at not fewer than 20,000, and until recently the deer have apparently found no great difficulty in supporting themselves; but increasing settlement, coupled with three unusually severe winters, has produced disastrous results, so that recourse to artificial feeding was found necessary. And it is evident that if the herd is to be maintained, assistance must be continued regularly.

MR. F. N. WILLIAMS has published the ninth part of his useful "Prodromus Floræ Britannicæ (C. Stutter, Brentford; price, by post, 2*s*. 9*d*.), containing diagnoses of fifty-three species of Dicotyledons. The descriptions and notes will doubtless render this work, when completed, of great interest and value to systematic botanists. It is much less likely, however, that the author's somewhat aberrant views regarding the larger groupings of orders or cohorts, as expressed in his system of classification, will meet with general acceptance.

PROF. J. W. BEWS, Natal University College, has written an interesting general account of the vegetation of Natal (Annals of Natal Museum, ii., 1912), evidently as a preliminary to a more detailed ecological survey of this colony. His paper, which is illustrated by ten fine plates made from photographs, is divided into two parts. In the first part, the author describes and discusses the various factors influencing plant-life in Natal—geological structure, soils, rainfall, mist, temperature, light, winds, fires, and animals. Under the last heading some interesting details are given concerning the effects upon the vegetation due to termites—"the scavengers of the forests"; to the giant earthworms, which may be a yard long and bring up very large amounts of soil as castings; to various rodents; and to the destructive native himself. The second part is devoted to a general sketch of the various plant associations, which are grouped under the three headings of shore, bush, and veld vegetation.

MR. C. BECKENHAUPT, in a tract entitled "Witterung, Erdoberfläche und Leben" (Humboldt-Bibliothek, Dr. W. Breitenbach, Brackwede i. W., 1912, price 2 marks), refers the ocean basins to the concentration of water in certain portions of the globe, whereby the primitive plastic crust became depressed. Such regions were at first equatorial, since the crust cooled there more slowly, and was therefore more capable of yielding. The formation of a basin leads to the upthrust of a continent, on which the growth of vegetation encourages further precipitation. The water runs off into the basin, and this consequently deepens, while the land adjacent to it rises. The author discusses, none too clearly, the causes that led to the rearrangement of the continents and oceans in a north-and-south direction, and urges that stability was given to the position of the earth's axis of rotation as continental land increased in height.

THE second volume of the Bulletin of the Seismological Society of America opens with papers of greater length and value than its predecessor. Prof. H. F. Reid, writing on the choice of a seismograph, enumerates the conditions which all such instruments should satisfy, and gives illustrated descriptions of the principal forms, with such useful details as the name of the maker and the price. Mr. N. F. Drake contributes a catalogue of 528 destructive earthquakes in China from B.C. 1831 to A.D. 1911. In all the principal districts they are most frequent in the summer months, a fact which Mr. Drake attributes to rapid and strong variations of atmospheric pressure, assisted by the heavy rain-storms which occur in summer. The enormous loss of life attributed to some earthquakes (such as more than 830,000 in 1556) is probably exaggerated, but Mr. Drake remarks that it may not be greatly overstated. The dense population is grouped in closely built cities, the houses are usually built of brick or stone, and are roofed with heavy tiles or earth, which becomes soaked after long-continued rains.

The Aëronautical Society has issued, in the form of an illustrated pamphlet of fifty-two pages, a short history of the society from the date of its foundation (1866), combined with an account of the progress of aëronautics during that period. Many books have been written in which the latter subject is treated in a popular way, but an exposition tracing the connection of our Aëronautical Society with these developments is a useful addition to the list. In view of the recent death of Mr. Wilbur Wright, the sections dealing with the work of the Wright Brothers are interesting. As a matter of fact, the original Wright experiments received little credence in this country, and the principal authentic records of them were, it is here stated, contained in a letter to Mr. Patrick G. Alexander in 1905. It is perhaps unfortunate that popular attention was directed to the feats of later aviators before the authenticity of these previous flights was generally admitted.

In a paper on the methods of measuring association between two attributes (*Statistical Journal*, lxxv., 6), Mr. G. Udny Yule considers the interpretation of data such as the following:—In a small-pox epidemic at a place—say, Sheffield—given the numbers of recoveries and deaths among vaccinated and unvaccinated patients, to find a measure of the association between vaccination and recovery. The author shows that the ordinary test fails to give consistent results in comparing different sets of observations, say, at Sheffield and Leicester, and he proposes to interpret them by constructing a "symmetrical table" from the observed data. If the values of these data be denoted by p, q, r, s, the numbers in this table are proportional to the square roots of ps and qr, and the measure of association derived from the symmetrical table will thus be a function of the ratio of the ratios of p to q and r to s, as it should be. The investigation, however, covers a much more extensive ground than this, and allied investigations by Pearson and Heron are criticised at considerable length.

The April number of the Journal of the Royal Meteorological Society contains a description of a new dew-gauge by Mr. S. Skinner, which appears to be both effective and simple. It consists of a Dewar vacuum goblet enclosed in a box, the top of which is flush with the edge of the goblet. When exposed at night the inside surface of the goblet cools by radiation and the moisture in the air in contact with it is deposited on the glass. In the morning the diameter of the drop of water collected at the bottom of the goblet is measured with a pair of compasses, and the volume of the drop determined by reference to a curve. The instrument is used in conjunction with a rain-gauge, so that a proper allowance may be made for water entering it as rain. As the result of observations made during 1909 and 1911 it appears that from 1 to 2 in. of dew falls in this country in the course of a year.

Prof. Planck's address to the German Chemical Society on December 16, 1911, has been published separately by the Leipzig Akademische Verlagsgesellschaft. After showing how the two laws of classical thermodynamics lead to an expression for the change of the energy of a body in terms of the heat absorbed and the work done on the body, Prof. Planck explains how, when changes take place at constant temperature, the "free energy" of Helmholtz, and when, in addition, the pressure is constant, the "thermodynamic potential" of Duhem, serve as the most convenient means of investigation. He then describes the theory introduced by Nernst six years ago that the entropy of a body at the absolute zero of temperature is zero, and shows how this leads to several further conclusions which have been verified by observation. In the last section of the address he announces that he has given up the idea of the atomic structure of energy, and has substituted for it the idea that the range from zero to unity of the probability of the condition of a material system is divided into discreet ranges each of finite length.

The Society for Promoting Christian Knowledge has added to its "Romance of Science Series" a volume entitled "Chemical Research in its Bearings on National Welfare." The book is written round the lecture delivered on January 11, 1911, by Prof. Emil Fischer, of the University of Berlin, on the occasion of the inauguration of the Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften, in the presence of the German Emperor. The lecture was printed in Nature of February 23, 1911 (vol. lxxxv., p. 558), and is utilised in the volume before us. The editor provides an introduction, in which the importance of scientific research to national well-being is insisted upon, and a running commentary to the paragraphs of the lecture serves to give the general reader an admirable view of the importance of progress in chemical science.

In a paper read before the Manchester Geological and Mining Society, and recently published by the Institution of Mining Engineers, Dr. John Harger makes some novel suggestions for the prevention of explosions in mines. He states that in discussions on the effect of coal dust in causing explosions, although in such explosions two factors are concerned—the composition of the dust and that of the air surrounding it—attention has been unduly concentrated on the former, and the influence of the surrounding atmosphere has been left out of account. He describes an apparatus used for testing the degree of inflammability of coal dusts in different atmospheres, and proves the importance of the percentage of oxygen. Thus a certain coal dust gave no ignition in an atmosphere containing 18 per cent. of oxygen, partial ignition with $18\frac{1}{2}$ per cent., and full ignition with 19 per cent. of oxygen. The results are suggestive, and are applied by the author to explain the contradictory results obtained by previous workers on the same subject. In particular, it is pointed out that a given coal dust can only be tested as to safety when in presence of air of the same composition as that of the mine. Dr. Harger suggests that if an atmosphere containing $17\frac{1}{2}$ per cent. of oxygen could be supplied to mines coal dust ignitions would be rendered impossible, and explosions of any kind quite out of the question. He holds that such an atmosphere would be quite as good for respiration. Practically, an atmosphere containing 19 to $19\frac{1}{4}$ per cent. of oxygen and $\frac{3}{4}$ to 1 per cent. of carbon dioxide would suffice for the majority of mines.

Engineering for June 14 contains an illustrated description of a ferro-concrete sludge-pumping pontoon for the Manchester Ship Canal. The pontoon measures 100 ft. long by 28 ft. wide by 8·5 ft. deep from the keel to the main deck, and is the first example of a ferro-concrete vessel in this country. The designs, on the Hennebique system, are the work of Messrs. L. G. Mouchel and Partners, Westminster. Reasons for the selection of ferro-concrete construction were lower initial cost, elimination of maintenance charges, and readiness of repair. There are four transverse and two longitudinal watertight bulkheads, thus amply providing for the security of the vessel. The work of construction was commenced in August last, and all ferro-concrete work was completed on March 9. The water-tight compartments have since been tested by filling with water. The pontoon is now ready for launching, an operation which will take place in the course of a few days.

WE have before us a number of attractive little volumes, in which many branches and aspects of science are successfully surveyed. The books belong to three distinct series, namely :—(1) Manuals of Science and Literature, published by the Cambridge University Press, at 1*s*. net a volume; (2) The Home University Library of Modern Knowledge, published by Messrs. Williams and Norgate, at the same price; and (3) The People's Books, published by Messrs. T. C. and E. C. Jack, at 6*d*. net each. Some of the volumes in the first two series have been noticed separately in our review columns, and they may be regarded as typical of the rest. The Cambridge books are mostly too technical for general readers, but for students who have some acquaintance with the subjects with which they deal, they are admirable. The books in the Home University Library are somewhat more popular, and are all on a high level of excellence. The People's Books represent an independent and significant venture, which we cordially hope will meet with success. In this series we are provided for the modest sum of sixpence each with dainty volumes of about ninety-six pages, written by people whose lives have been devoted to the subjects which they survey. With such an abundance of accurate and authoritative knowledge available, everyone who desires can be put into touch with the present position of fact and opinion upon all scientific subjects of outstanding importance. Whatever demand exists for cheap books upon the various departments of natural knowledge is satisfactorily met by the volumes in this series, and we trust the enterprise of the publishers will meet with decided success. That there should be three comprehensive series of more or less popular books in which the volumes dealing with branches of science are written by men and women of distinction may, we hope, be taken as an indication of increased interest in scientific work.

MESSRS. JOHN WHELDON AND CO., 38 Great Queen Street, Kingsway, W.C., have just issued a classified zoological catalogue, comprising faunas of all countries, and including extensive collections of works on ornithology, mammalia, reptilia, fish and fisheries and general zoology.

OUR ASTRONOMICAL COLUMN.

CONSTITUTION OF THE MILKY WAY.—At this epoch when many theories as to the construction of our universe are being propounded, the collection and correlation of the available data is a labour of great value, and such works as Prof. Charlier's "Studies in Stellar Statistics" become invaluable.

His first memoir, appearing as No. 8 of the *Meddelanden fran Lunds Astronomiska Observatorium*, deals with the constitution of the Milky Way, and although not generally suitable for popular treatment, contains a very striking exposition of the difficulties which beset the investigator, chiefly because the data are, as yet, so few. In this memoir he deals with the number of stars in different parts of the galaxy, and the distribution of their luminosities; subsequent memoirs will deal with the problems from other points of view. Dividing the sky into forty-eight squares of equal area, he finds *inter alia* that a certain square in the Milky Way contains between 30,000,000 and 250,000,000 stars, while in a square containing the pole of the Milky Way the corresponding limits are 600,000 and 2,000,000. The wide limits well illustrate the uncertainty produced by the paucity of the data available. Similarly, Prof. Charlier finds that the limiting distance of our stellar system, in the direction of the plane of the Milky Way, may be put between 600 and 1400 "siriometers," the "siriometer" being a distance equal to a million times the sun's mean distance from the earth.

THE SOLAR ECLIPSE OF APRIL 17.—The current number (53–54) of the *Gazette Astronomique* contains a large number of observations of the solar eclipse of April 17, made by the various parties organised by the energetic astronomical society of Antwerp to observe at Silenrieux, in the province of Namur. The results show that the central line passed exceedingly close to, or over, Silenrieux. A memoir embodying the complete results of the observations and their discussion is being prepared for publication by the society.

Other important results are published in *L'Astronomie* for June, and are illustrated by many interesting diagrams and photographs. Among the latter are three by M. Rudaux, who observed in the Pyrenees, the first showing the dark moon projected on the lower corona beyond the northern cusp of the